

Using 3D visualization to portray Elwha River dam-removal

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Debate over restoration of river ecosystems can become contentious and polarizing: residents facing river management decisions may have a deep-rooted concern about large-scale landscape change, and fear of the unknown. Helping citizens and elected officials visualize the future is critical to the success of such significant projects. American Rivers (a 30-year old national river conservation group) is actively involved in salmon recovery and dam removal across the PNW. In 2008, this country's largest dam removal and sediment stabilization ever undertaken will occur on the Elwha River. We use powerful GIS-based software to generate 3-dimensional landscape visualizations depicting the landscape before, during, and after dam removal. Orthophotography and satellite imagery is draped over terrain models and enhanced with photographic features such as natural landmarks, buildings, and riparian terrain. We believe this represents the first use of this software to portray infrastructure deconstruction coupled with environmental restoration. At town hall meetings local citizens can navigate through various sites before and after deconstruction, and personally explore changes to the valley. The visualization can be modified in real-time to depict stakeholder concerns. Excerpts from model landscapes have been captured as digital movies, videotape, and still images, for use in other venues and media campaigns.